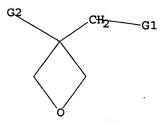
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

=>
Uploading C:\Program Files\Stnexp\Queries\rkc663.str

L1 STRUCTURE UPLOADED

=> d L1 HAS NO ANSWERS L1 STR



G1 Cl, Br, I, Ph, OSO3H, SO3H

G2 Me,Et

Structure attributes must be viewed using STN Express query preparation.

=> s l1 ful

FULL SEARCH INITIATED 12:20:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 12050 TO ITERATE

100.0% PROCESSED 12050 ITERATIONS 83 ANSWERS

SEARCH TIME: 00.00.01

L2 83 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
161.33
161.81

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FILE COVERS 1907 - 27 Jul 2005 VOL 143 ISS 5 FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> s 12
           194 L2
L3
=> s l3 and phase(1w)transfer
       1595570 PHASE
        737312 TRANSFER
         15987 PHASE (1W) TRANSFER
            13 L3 AND PHASE (1W) TRANSFER
=> d 1-13 fbib abs fhitstr
     ANSWER 1 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     2004:169041 CAPLUS
DN
     140:424050
     Synthesis and cationic photopolymerization of a new fluorinated oxetane
TI
AU
     Sangermano, M.; Bongiovanni, R.; Malucelli, G.; Priola, A.; Thomas, R. R.;
     Medsker, R. E.; Kim, Y.; Kausch, C. M.
     Politecnico di Torino, Dipartimento di Scienza dei Materiali e Ingegneria
CS
     Chimica, Turin, 10129, Italy
SO
     Polymer (2004), 45(7), 2133-2139
     CODEN: POLMAG; ISSN: 0032-3861
PB
     Elsevier Science Ltd.
DT
     Journal
     English
LA
     A new fluorinated oxetane monomer (FOX) was prepared using a fluorinated
AB
     alc. by phase transfer catalysis in a Williamson ether
     synthesis. The new fluorinated monomer was used in cationic photopolymn.
     as comonomer of 3,3'-[oxydi(methylene)]bis(3-ethyloxetane). The presence
     of the FOX monomer induces a decrease of the glass transition temperature,
     thermal stabilization and an increase of the final oxetane group
     conversion. Completely hydrophobic surfaces were obtained with a
     selective enrichment of the fluorinated comonomer, as confirmed by contact
     angle and XPS anal.
IT
     78385-26-9, 3-Bromomethyl-3-methyloxetane
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction with nonafluorohexanol in preparation of fluorinated monomer)
     78385-26-9 CAPLUS
RN
CN
     Oxetane, 3-(bromomethyl)-3-methyl- (9CI) (CA INDEX NAME)
```

BrCH2

L4

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

2003:750696 CAPLUS AN 139:245891 DN Preparation of oxetane ethers from halides and alcohols TТ Koike, Nobuaki; Ito, Tadakazu IN PA Toa Gosei Chemical Industry Co., Ltd., Japan SO Jpn. Kokai Tokkyo Koho, 6 pp. CODEN: JKXXAF Patent DT Japanese LA FAN.CNT 1

ANSWER 2 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

	PATENT NO.	KIND	DATE .	APPLICATION NO.	DATE
PI	JP 2003267961	A2	20030925	JP 2002-74481 JP 2002-74481	20020318 20020318

OS MARPAT 139:245891

AB Oxetane ethers, useful as materials for photocurable resins and thermosetting resins, are prepared from halides and alcs. in the presence of polyalkyl ethers to shorten the reaction time. BuCHEtCH2OH was added

```
dropwise to a mixture of 3-chloromethyl-3-ethyloxetane, PEG 600, KOH, and
     xylene at 120° over 1 h while removing H2O to give 75.5%
     3-ethyl-3-(2-ethylhexyloxymethyl)oxetane.
     2177-22-2, 3-Chloromethyl-3-ethyloxetane
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of oxetane ethers from halides and alcs. using polyalkyl ethers
        as phase-transfer catalyst)
     2177-22-2 CAPLUS
     Oxetane, 3-(chloromethyl)-3-ethyl- (7CI, 8CI, 9CI)
                                                         (CA INDEX NAME)
     ANSWER 3 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
     2003:211114 CAPLUS
     138:402298
     Synthesis and characterization of novel oxetane macromonomers
     Fujiwara, Tomoko; Makal, Umit; Uilk, Janelle; Wynne, Kenneth J.
     Chemical Engineering Department, Virginia Commonwealth University,
     Richmond, VA, 23284, USA
     Polymer Preprints (American Chemical Society, Division of Polymer
     Chemistry) (2003), 44(1), 785
     CODEN: ACPPAY; ISSN: 0032-3934
     American Chemical Society, Division of Polymer Chemistry
     Journal; (computer optical disk)
     English
     To obtain various surface properties, many kinds of macromonomers with low
     glass transition temps. (Tg) have chemical architected as soft blocks in
     elastomers and thermoplastics. In this work, novel oxetane macromonmomers
     were prepared and characterized. The monomer, 3-(Methoxyethoxymethyl)-
     3-methyloxetane (ME2Ox) was synthesized using phase
     transfer catalyst (PTC) process. The ME2Ox macromonmomer and
     Functional Macromonomers comprising hydrophilic (methoxyethoxyethoxy) and
     hydrophobic (penta-, hexafluoroethoxy) pendant groups (ME20x/F0x
     macromonomer) in an alc. terminated were synthesized by cationic ring
     opening polymerization
     78385-26-9
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (synthesis and characterization of novel oxetane macromonomers)
     78385-26-9 CAPLUS
    Oxetane, 3-(bromomethyl)-3-methyl- (9CI)
                                               (CA INDEX NAME)
RE.CNT 5
             THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
    ANSWER 4 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
    2002:514289 CAPLUS
    137:63169
    Preparation of ethers having oxetane ring without using phase-
```

ΙT

RN

CN

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ΤI

IN

PA

SO

DT

LA

transfer catalysts

CODEN: JKXXAF

Patent

Japanese

Kato, Hisao; Kuriyama, Akira

Jpn. Kokai Tokkyo Koho, 4 pp.

Toa Gosei Chemical Industry Co., Ltd., Japan

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FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                           APPLICATION NO.
                                                                   DATE
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PΙ
     JP 2002193960
                          A2
                                20020710
                                            JP 2000-389925
                                                                   20001222
                                            JP 2000-389925
                                                                   20001222
OS.
     CASREACT 137:63169
     Title ethers are prepared by treatment of resorcin with 3-halomethyl-3-
AB
     alkyloxetane with continuously or intermittently supplying alkalies to the
     reaction mixts. and with removing H2O from the mixts. Thus, aqueous KOH was
     dropwise added to a mixture of resorcin and 3-chloromethyl-3-ethyloxetane at
     120° and 150 mmHg over 7 h with removing H2O to give 91.7% resorcin
     2177-22-2, 3-Chloromethyl-3-ethyloxetane
IT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of resorcin ethers having oxetane ring without using
        phase-transfer catalysts)
RN
     2177-22-2 CAPLUS
     Oxetane, 3-(chloromethyl)-3-ethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)
CN
L4
     ANSWER 5 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     2002:481328 CAPLUS
DN
     137:185947
ΤI
     Synthesis, Characterization, and Unusual Surface Activity of a Series of
     Novel Architecture, Water-Dispersible Poly(fluorooxetane)s
ΑU
     Kausch, Charles M.; Leising, Jane E.; Medsker, Robert E.; Russell, Vernon
     M.; Thomas, Richard R.; Malik, Aslam A.
CS
     OMNOVA Solutions Inc., Akron, OH, 44305-4489, USA
     Langmuir (2002), 18(15), 5933-5938
SO
     CODEN: LANGD5; ISSN: 0743-7463
     American Chemical Society
PB
DT
     Journal
     English
LA
     A series of water-dispersible, surface-active poly(fluorinated oxetane)s
AB
     was prepared by ring-opening polymerization of fluorinated oxetane monomers using
     Lewis acid catalysis. The fluorinated oxetane monomers are made by
     phase-transfer catalytic reaction of a fluorinated alc.
     with 3-bromomethyl-3-methyloxetane. Water dispersibility was introduced
     by conversion of the diol-terminated \alpha, \omega-
     (dihydroxy)poly(fluorinated oxetanes) into diammonium salts of
     \alpha, \omega-sulfate esters. The poly(fluorinated oxetane) salts
     exhibit unusually low surface tensions for materials based on a pendant
     trifluoro- or pentafluoroalkyl group. At a critical micelle concentration of
     .apprx.10-5 mol/L (.apprx.10-3 weight %), surface tensions of .apprx.20-30
     mN/m are obtained. The novel architecture of the poly(fluorinated
     oxetane) salts is thought to be responsible for the anomalous surface
     activity.
IT
     78385-26-9, 3-Bromomethyl-3-methyloxetane
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (synthesis, characterization, and unusual surface activity of a series
        of novel architecture, water-dispersible poly(fluorooxetane)s)
RN
     78385-26-9 CAPLUS
```

Oxetane, 3-(bromomethyl)-3-methyl- (9CI) (CA INDEX NAME)

BrCH₂——O

CN

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4
    ANSWER 6 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
AN
    2002:359871 CAPLUS
DN
    136:355150
    Preparation of ethers from 3-alkyl-3-hydroxymethyloxetane without using
TI
    phase-transfer catalysts
IN
    Kato, Hisao; Ito, Tadakazu; Kuriyama, Akira
PΑ
     Toa Gosei Chemical Industry Co., Ltd., Japan
SO
     Jpn. Kokai Tokkyo Koho, 5 pp.
     CODEN: JKXXAF
     Patent
דת
     Japanese
LΑ
FAN.CNT 1
                        KIND
     PATENT NO.
                               DATE APPLICATION NO.
                                                                 DATE
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                                          ______
                                                                 -----
     JP 2002138084
                                           JP 2000-334173
ΡI
                        A2
                               20020514
                                                                20001101
                                           JP 2000-334173
                                                                20001101
OS
    CASREACT 136:355150
    Ethers are prepared by (A) addition of alkali to a mixture of
AB
     3-alkyl-3-hydroxymethyloxetane and primary halide with removing H2O, or by
     (B) addition of 3-alkyl-3-hydroxymethyloxetane to a mixture of primary halide
     and alkali with removing water. Thus, aqueous KOH was dropwise added to a
    mixture of 3-chloromethyl-3-ethyloxetane, 3-ethyl-3-hydroxymethyloxetane,
     and MePh under reflux with removing water to give the corresponding ether
     with 75.6% reactivity and 89.1% selectivity.
     2177-22-2, 3-Chloromethyl-3-ethyloxetane
IT
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (etherification of 3-alkyl-3-hydroxymethyloxetane)
RN ·
    2177-22-2 CAPLUS
CN
    Oxetane, 3-(chloromethyl)-3-ethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)
L4
    ANSWER 7 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     2001:111299 CAPLUS
DN
    134:162910
TI
    Preparation of 3-chloromethyloxetanes
IN
     Ito, Tadakazu; Kuriyama, Akira
PA
     Toa Gosei Chemical Industry Co., Ltd., Japan
SO
     Jpn. Kokai Tokkyo Koho, 4 pp.
     CODEN: JKXXAF
\mathtt{DT}
     Patent
     Japanese
LA
FAN.CNT 1
                        KIND
     PATENT NO.
                               DATE
                                         APPLICATION NO.
                                                                 DATE
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                                          -----
ΡI
    JP 2001039961
                        A2
                               20010213 JP 1999-210175
                                                                19990726
                                          JP 1999-210175
                                                                 19990726
OS
    CASREACT 134:162910
AB
    Title compds. are prepared by dehydrochlorination of 2,2-
    bis(chloromethyl)alkan-1-ol or their esters in the presence of
    phase transfer catalysts in aqueous solution or suspension of
     alkalies, separation of organic phase from water phase, extraction of the catalysts
     with water, and reuse of the catalysts in water. 2,2-
     Bis(chloromethyl)propan-1-ol was dehydrochlorinated in the presence of
     tetra-n-butylammonium bromide in aqueous NaOH at 80-100° for 4 h to
     give 91% 3-chloromethyl-3-ethyloxetane. Tetra-n-butylammonium bromide was
    recovered from washing water with 74% recovery.
IT
     822-48-0P, 3-Chloromethyl-3-ethyloxetane
     RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
```

(Preparation)
(preparation of chloromethyloxetanes by dehydrochlorination of bis(chloromethyl)alkanols)

RN 822-48-0 CAPLUS CN Oxetane, 3-(chlos

Oxetane, 3-(chloromethyl)-3-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

ANSWER 8 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

2000:199323 CAPLUS

DN 132:237514

TI Manufacture of bis(3-alkyloxetan-3-ylmethyl) ethers

Ito, Tadakazu; Sasaki, Hiroshi; Kuriyama, Akira

PA Toa Gosei Chemical Industry Co., Ltd., Japan

Ι

Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 2000086646	A2	20000328	JP 1998-274270	19980911
				JP 1998-274270	19980911
00	MADDAT 122.227E14			·	

OS MARPAT 132:237514

GI

L4

AN

IN

SO

AB Title compds. I (R = C1-10 alkyl), useful as monomers (no data), are
 manufactured by reaction of 3-halogenomethyl-3-alkyloxetanes in aqueous alkaline solns.
 or dispersions in the presence of phase-transfer
 catalysts. Thus, a mixture of 3-chloromethyl-3-ethyloxetane,
 3-hydroxymethyl-3-ethyloxetane, Bu4PBr, and KOH was heated at 120°
 for 8 h to give 84.0% I (R = Et).
IT 2177-22-2, 3-Chloromethyl-3-ethyloxetane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (manufacture of bis(alkyloxetanylmethyl) ethers from
 alkyl(halomethyl)oxetanes)
RN 2177-22-2 CAPLUS

CN Oxetane, 3-(chloromethyl)-3-ethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

L4 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:749724 CAPLUS

DN 129:316133

```
TI
     Method for preparing 3-(chloromethyl)-3-alkyloxetanes
IN
     Ito, Naokazu; Hirose, Toshiro
     Toagosei Co., Ltd., Japan Fr. Demande, 23 pp.
PA
SO
     CODEN: FRXXBL
DT
     Patent
     French
LA
FAN.CNT 3
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                                                                   DATE
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                                            ------
                                                                    -----
     FR 2760011
PΙ
                          A1
                                19980828
                                            FR 1998-493
                                                                    19980119
     FR 2760011
                        · B1
                                20000218
                                            JP 1997-24563
                                                               A 19970124
                                            JP 1997-31384
                                                                A 19970131
                                            JP 1997-196450
                                                                A 19970707
                                            JP 1997-24563
     JP 10204071
                         A2
                                19980804
                                                                   19970124
     JP 3367549
                          B2
                                20030114
                                            JP 1997-31384
     JP 10212282
                          A2
                              19980811
                                                                   19970131
     JP 11029562
                         A2
                                19990202
                                            JP 1997-196450
                                                                   19970707
PATENT FAMILY INFORMATION:
FA
ΡI
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FAN	1998:498636 PATENT NO.	KIND	DATE			DATE
PI	JP 10204071	A2	19980804	JP 1997-24563		19970124
	JP 3367549	B2 ·	20030114			
	FR 2760011	A1	19980828	FR 1998-493		19980119
	FR 2760011	B1	20000218			•
				JP 1997-24563	Α	19970124
				JP 1997-31384	Α	19970131
				JP 1997-196450	A	19970707
	US 5886199	Α	19990323	US 1998-10508		19980122
				JP 1997-24563	Α	19970124
				JP 1997-31384	A	19970131
				JP 1997-196450	Α	19970707
FAN	1998:512470		•			
	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
ΡI	JP 10212282	A2	19980811	JP 1997-31384		19970131
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	FR 2760011	B1	20000218			
				JP 1997-24563	Α	19970124
				JP 1997-31384	Α	19970131
				JP 1997-196450	A	19970707
	US 5886199	A	19990323	US 1998-10508		19980122
				JP 1997-24563	Α	19970124
				JP 1997-31384	A	19970131
				JP 1997-196450	Α	19970707
ΔR	Title compde	are prepared	by dehydro	chlorination of 1	1-bic/	ahlaramath.

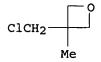
AB Title compds. are prepared by dehydrochlorination of 1,1-bis(chloromethyl)-1-(hydroxymethyl)alkanes or elimination of acid chloride from a 1,1-bis(chloromethyl)-1-(hydroxymethyl)alkane ester in an aqueous alkaline solution or suspension, optionally in the presence of a phase-transfer ammonium catalyst or an anion-exchange resin. Thus, heating 51 g of 1,1-bis(chloromethyl)-1-(hydroxymethyl)propane 10% aqueous NaOH gave an 81% yield of 3-(chloromethyl)-3-ethyloxetane.

IT 822-48-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

822-48-0 CAPLUS

CN Oxetane, 3-(chloromethyl)-3-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN

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AN
    1998:512470 CAPLUS
DN
    129:175547
ΤI
    Preparation of 3-chloromethyl-3-alkyloxetanes
IN
    Ito, Tadakazu; Hirose, Toshiyoshi
    Toa Gosei Chemical Industry Co., Ltd., Japan
D\Delta
    Jpn. Kokai Tokkyo Koho, 5 pp.
SO
    CODEN: JKXXAF
    Patent
DТ
LA
    Japanese
FAN.CNT 3
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    JP 10212282
                      A2
PΙ
                            19980811
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                                                            19970131
    FR 2760011
                     A1
                            19980828 FR 1998-493
                                                            19980119
    FR 2760011
                      B1
                            20000218
                                       JP 1997-24563
                                                      A 19970124
                                       JP 1997-31384
                                                       A 19970131
                                                       A 19970707
                                       JP 1997-196450
    US 5886199
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                            19990323
                                                            19980122
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FAN 1998:498636
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                     B2 20030114
    JP 3367549
    FR 2760011
                     A1 19980828
                                       FR 1998-493
                                                            19980119
    FR 2760011
                      B1
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                                       JP 1997-31384
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                                                       A 19970707
    US 5886199
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                                                        A 19970124
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                                       JP 1997-31384
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                                       JP 1997-196450
                                                        A 19970707
FAN 1998:749724
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                            DATE
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PΙ
    FR 2760011
                      A1
                            19980828
                                       FR 1998-493
                                                            19980119
    FR 2760011
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                                       JP 1997-24563
                                                       A 19970124
                                       JP 1997-31384
                                                       A 19970131
                                       JP 1997-196450
                                                       A 19970707
    JP 10204071
                    A2
                            19980804
                                       JP 1997-24563
                                                            19970124
    JP 3367549
                      B2
                            20030114
    JP 10212282
JP 11029562
                     A2
                            19980811
                                       JP 1997-31384
                                                            19970131
                      A2
                            19990202
                                       JP 1997-196450
                                                            19970707
os
    CASREACT 129:175547
AΒ
    Title compds. are prepared by dehydrochlorination or deesterification of
    1,1-bis(chloromethyl)-1-hydroxymethylalkanes or their carboxylic acid
    esters in the presence of phase transfer catalysts in
    aqueous solns. or aqueous suspensions of alkalies. 1,1-Bis(chloromethyl)-1-
    hydroxymethylpropane was treated with Bu4NBr in a NaOH aqueous solution at
    80° for 3 h to give 92% 3-chloromethyl-3-ethyloxetane.
IT
    822-48-0P, 3-Chloromethyl-3-methyloxetane
    RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
    (Preparation)
       (preparation of chloromethylalkyloxetanes by cyclization of
       bis (chloromethyl) hydroxymethylalkanes using phase
       transfer catalysts in alkali aqueous solns.)
RN
    822-48-0 CAPLUS
    Oxetane, 3-(chloromethyl)-3-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)
CN
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AN	1996:567244 CAPLUS	FIOS C	OFIRIGHI 200	3 ACS ON SIN						
DN TI	125:196663									
11	Mono-substituted fluorinated oxetane monomers from 3-haloalkyl-3- alkyloxetanes, copolymers and prepolymers, and elastomers									
IN	Malik, Aslam A.; Manser, Gerald E.; Archibald, Thomas G.; Duffy-Matzner, Jetty L.; Harvey, William L.; Grech, Gary J.; Carlson, Roland P.									
PA	Aerojet-General Cor			sary J.; Carison, Roll	and P.					
so	PCT Int. Appl., 136		ii, oon							
	CODEN: PIXXD2	FF								
DŢ	Patent									
LA	English									
FAN.	CNT 3									
	PATENT NO.	 KIND	DATE	APPLICATION NO.						
ΡI	WO 9621657 W: CA, JP, US		19960718	WO 1996-US1077	19960116					
			. ES. FR. GB	B, GR, IE, IT, LU, MC	. NI. PT. SE					
	,,,	,	, _0, _1,, 02	US 1995-371914						
	US 5807977	Α	19980915	US 1995-371914	19950112					
				US 1992-911461	B2 19920710					
				US 1993-80614 US 1994-206618	B1 19930621					
				US 1994-206618	B2 19940307					
	EP 811004									
	R: AT, BE, CH,	DE, DK	, ES, FR, GB	B, GR, IT, LI, LU, NL	, SE, MC, PT, IE					
				US 1995-371914 WO 1996-US1077	W 19960116					
	JP 11500422	T2	19990112		19960116					
				US 1995-371914	A 19950112					
•				WO 1996-US1077	W 19960116					
	NT FAMILY INFORMATION	N:								
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US US US	R: AT, 11500422 6380351 6417314 6448368			DE, T2 B1 B1 B1	DK,	ES, 19990 20020 20020	FR, 112 430 709 910	GB,	EP GF US WO US	1996 7, IT 1995 1996 1996 1996 1997 1998	-9036 -3719 -US10 -5218 -3719 -US10 -5212 -9114 -8060 -3719 -9114 -8060 -3719 -9114 -8060 -3719 -9114 -8060 -3719 -4777 -5204 -8060 -3719 -4777 -5204	599 LU, 914 977 981 977 981 977 981 977 981 977 981 977 981 977 981 977 981 981 981 981 981 981 981 981 981 981	NL, S A W B2 B1 B2 A3 A1 B2 B1 B2 A3 A1 B2 B1 B2 A3 A1	19960116 E, MC, PT 19950112 19960116 19960116 19950112 19960116 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20003081	, IE
US US US	R: AT, 11500422 6380351 6417314 6448368			DE, T2 B1 B1 B1	DK,	ES, 19990 20020 20020	FR, 112 430 709 910	GB,	EP GF US WO US	1996 7, IT 1995 1996 1996 1996 1997 1998	-9036 -3719 -US10 -5218 -3719 -US10 -5212 -9114 -8060 -3719 -9114 -8060 -3719 -9114 -8060 -3719 -4770 -5212 -9114 -8060 -3719 -4770 -5204 -3719 -3719 -3719 -3719 -3719	599 LU, 914 977 981 977 981 977 981 977 981 977 978 978 978 978 978 978 978 978 978	NL, S A W B2 B1 B2 A3 A1 B2 B1 B2 A3 A1 B2 B1 B2 A3 A1	19960116 E, MC, PT 19950112 19960116 19960116 19950112 19960116 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20030918 19950112	, IE
US US JP	R: AT, 11500422 6380351 6417314 6448368 6891013	57		DE, T2 B1 B1 B1	DK,	ES, 19990 20020 20020	FR, 112 430 709 910 510	GB,	EP GF US WO US	1996 1996 1995 1996 1996 1996 1997 1998 1998 1998 1999 1998 1999 1998	- 9036 - 11 - 3719 - US10 - 5218 - 3719 - US10 - 5212 - 9114 - 8063 - 4773 - 5212 - 9114 - 8063 - 4773 - 5212 - 9114 - 8063 - 4773 - 5212 - 9114 - 8063 - 3719 - 4773 - 5212 - 3719 - 5214	59 LU 59 LU 50	NL, S A W B2 B1 B2 A3 A1 B2 B1 B2 A3 A1 B2 B1 B2 A3 A1	19960116 E, MC, PT 19950112 19960116 19960116 19950112 19960116 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950607 20000308 19920710 19930621 19940307 19950607 20000308 19920710 19930621 19940307 19950607 20000308 19920710 19930621 19940307 19950607 20000308 19950112 19950607 20030918 19950112 19960116	, IE
US US JP	R: AT, 11500422 6380351 6417314 6448368	57		DE, T2 B1 B1 B1	DK,	ES, 19990 20020 20020	FR, 112 430 709 910 510	GB,	EP GF US WO US	1996 7, IT 1995 1996 1996 1996 1997 1998	- 9036 - 11 - 3719 - US10 - 5218 - 3719 - US10 - 5212 - 9114 - 8063 - 4773 - 5212 - 9114 - 8063 - 4773 - 5212 - 9114 - 8063 - 4773 - 5212 - 9114 - 8063 - 3719 - 4773 - 5212 - 3719 - 5214	59 LU 59 LU 50	NL, S A W B2 B1 B2 A3 A1 B2 B1 B2 A3 A1 B2 B1 B2 A3 A1	19960116 E, MC, PT 19950112 19960116 19960116 19950112 19960116 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20000308 19920710 19930621 19940307 19950112 19950607 20030918 19950112	, IE

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US 1992-911461
                    B2 19920710
US 1993-80614
                    B1 19930621
US 1994-206618
                    B2 19940307
US 1995-371914
                    A3 19950112
US 1995-477168
                    A1 19950607
US 2000-520815
                    A1 20000308
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os MARPAT 125:196663

AB

The title monomers having fluorinated alkoxymethylene side-chains are prepared in high yield by the reaction of fluorinated alkoxides with either 3-halomethyl-3-methyloxetane premonomers, generally 3-haloalkyl-3alkyloxetanes as starting materials, or aryl sulfonate derivs. of 3-hydroxymethyl-3-methyloxetane premonomers, optionally using phase transfer catalyst. Preparation of a mono-substituted 3-bromomethyl-3-methyloxetane premonomer via a simple, high yield process is amenable to com. scale-up. The fluorinated oxetane monomers are useful for the production of fluorinated prepolymers and elastomers which exhibit an improved water contact angle on a fluorinated oxetane elastomer as compared to a Teflon surface. The reaction of 2,2,3,3,4,4,4heptafluorobutan-1-ol and 3-hydroxymethyl-3-methyloxetane p-toluenesulfonate at 75-85° for 30 h in the presence of NaH/DMF gave 3-(2,2,3,3,4,4,4-heptafluorobutoxymethyl)-3-methyloxetane (I) from purification of the oil. I polymerization was initiated by 1,4-butanediol in the presence of BF3-Et2O to give a product having number-average mol. weight 4417 and glass transition temperature -45°, which was further polymerized with Desmodur W and Isonol 93 crosslinker to give a polyurethane having surface energy 13.2 ergs/cm2, vs. 18.5 ergs/cm2 for Teflon.

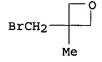
IT 78385-26-9P, 3-Bromomethyl-3-methyloxetane

> RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(fluorinated oxetane monomers for fluoro polyether prepolymers, and elastomers)

RN 78385-26-9 CAPLUS

Oxetane, 3-(bromomethyl)-3-methyl- (9CI) (CA INDEX NAME)



CN

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L4
    ANSWER 12 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
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AN 1996:392139 CAPLUS

DN 125:115461

TΤ Solvent-free process for the synthesis of energetic oxetane monomers . IN

Malik, Aslam A.; Manser, Gerald E.; Carson, Roland P.; Archibald, Thomas

PA Aerojet-General Corp., USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT NO.		KIND	DATE	APPLICATION NO.	DATE	
PI	US 5523424	A	19960604	US 1994-334708	19941104	
OS	MAPDAT 125.115461			US 1994-334708	19941104	

GI

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3,3-Bis(azidomethyl)oxetane (I) is manufactured by reaction of oxetanes II (R1,
AB
     R2 = tosylate, mesylate, or halo) with aqueous solns. of metallic azide in the
     presence of phase-transfer catalysts, and oxetanes III
     (R1 = H, lower alkyl, alkoxy, OH, NF2, ONO2, or NO2) are manufactured by
     reaction of II (R1 = same as in III, R2 = tosylate, mesylate, or halo)
     with aqueous solns. of metallic azide in the presence of phase-
     transfer catalysts. I and III can be polymerized to form homopolymers
     and copolymers with load bearing polyether backbones and highly energetic
     pendant groups (no data).
     822-48-0, 3-Chloromethyl-3-methyloxetane
IT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (water-based process for the synthesis of mono- and
        bis(azidomethyl) oxetane monomers using phase-transfer
        catalysts)
RN
     822-48-0 CAPLUS
     Oxetane, 3-(chloromethyl)-3-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)
CN
C1CH<sub>2</sub>
     ANSWER 13 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
L4
ΑN
     1990:21367 CAPLUS
DN
     112:21367
     Polymer reactions of the pendant alkyl bromides of soluble and insoluble
ΤI
     polyoxetanes for the preparation of chemically modified polyethers
     Motoi, Masatoshi; Suda, Hiroshi; Kijima, Masato; Doi, Tetsuya; Nakagawa,
ΑU
     Tsuyoshi; Kanoh, Shigeyoshi
     Fac. Technol., Kanazawa Univ., Kanazawa, 920, Japan
CS
     Polymer Journal (Tokyo, Japan) (1989), 21(6), 451-65
SO
     CODEN: POLJB8; ISSN: 0032-3896
     Journal
DT
     English
LA
     Soluble and insol. polyoxetanes with \omega-brom-2-oxaalkyl side chains of
AΒ
     CH2O(CH2)nBr (n = 4 or 6) were prepared by cationic ring-opening polymerization of
     3-(ω-bromo-2-oxaalkyl)-3-methyloxetanes and by their co- or
     terpolymns. with other oxetanes and/or crosslinking agents such as
     bisoxetanes X-CH2O(CH2)nOCH2-X (X = 3-methyl-3-oxetanyl and n = 4 or 6).
     The bromine at the 2-oxapolymethylene-spacer end of the soluble polymers were
     converted into the corresponding functional groups by polymer reactions
     with several nucleophiles such as anions of carboxylates and alkoxides,
     and amines. The pendant acetoxyl and cyclic acetal groups, thus
     introduced, were hydrolyzed to give the corresponding hydroxyl groups.
     Quaternization of the pendant bromides of the uncrosslinked and
     crosslinked polyoxetanes took place with nicotinamide or tributylamine.
     The product polymers with a tetraalkylammonium moiety showed catalytic
     activity for a phase-transfer catalytic reaction of
     alcs. and alkyl bromides giving ether compds. in satisfactory yields.
     Electrophilic substitutions such as bromination, nitration, and acylation
     were examined in pendant aromatic rings of poly(3-benzyloxetane). The
     electrophilic substitutions occurred at 70 to 90g, although some decrease
     in the mol. weight of the product polymer was observed owing to ether cleavage
     of the polymer chain under acidic conditions.
     124221-80-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
         (preparation and cationic ring-opening polymerization of)
RN
     124221-80-3 CAPLUS
     Oxetane, 3-methyl-3-(phenylmethyl)- (9CI) (CA INDEX NAME)
CN
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